***COMPLETE IN NOTEBOOK! COPY ALL FIGURES!***

CW53/HW53: Similar Triangles in the CP

**Geometry  
Due: Wednesday, January 25th**

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| FAILURE TO WRITE IN COMPELTE SENTENCES OR SHOW ALL WORK WILL RESULT IN LASALLE | |
| 1. Triangle ABC has vertices A(3,-3), B(8,3), and C(8,-3).  a) Graph triangle ABC  b) Triangle DEF is the image that resulted from the dilation of triangle ABC. The coordinates of triangle DEF are D(1,1.5), E(4,1.5), and F(4,-1.5). Graph triangle DEF on the coordinate plane in part a c) What scale factor was used? How did you determine the scale factor? d) Is the dilation an enlargement or reduction? Explain your reasoning. | |
| 2.  ../../../../Desktop/Screen%20Shot%202017-01-21%20at%205.49.57%20PM.pn | a) What scale factor was used? How did you determine the scale factor? b) Is the dilation an enlargement or reduction? Explain your reasoning. |
| 3. Triangle PWN is has vertices P(-1,1), W(3,3), and N(3,0).  a) Dilate triangle PWN using a scale factor of 4 to form triangle GKA.  b) What are the coordinates of the dilated image? c) Describe *how* you performed the dilation in part a and how you knew to do that.  d) Is the dilation an enlargement or reduction? Explain your reasoning. | |
| 4. Triangle ZEN has vertices Z(-5,3), E(8,8), and N(10,1).  a) Dilate triangle ZEN using a scale factor of ½ to form triangle FRB.  b) What are the coordinates of the dilated image? c) How did you determine the coordinates of the dilated image?  d) Is the dilation an enlargement or reduction? Explain your reasoning. | |
| 5. Are the two triangles below similar? Explain your answer using dilations, rotations, reflections, and translations.  ../../../../Desktop/Screen%20Shot%202017-01-21%20at%205.55.33%20PM.pn | |
| 6. Copy and finish the table below in your notebook: Plot the points from the column “Pre-Image.” Dilate the points by the given scale factor with center (0, 0) and plot and label the images. Write the coordinates of the images in the column, “Image.”   |  |  |  | | --- | --- | --- | | **Pre-Image** | **Scale Factor** | **Image** | | A(2, 2), B(3, 4), C(4, 2) | 2 |  | | G(1, -1), H(1, -3), I(3, -3) | 3 |  | | J(-8, 8), K(-8, 10), L(-4, 10), M(-4, 8) |  |  | | N(-8, -8), O(-8, -4), P(-4, -4), Q(-4, -8) |  |  | | |
| 7. **:** Use the graph below to describe the dilations that map the following pre-images to their images: a) Triangle ABC to Triangle A’B’C’ b) Triangle DEF to Triangle D’E’F’ c) Quadrilateral GHIJ to Quadrilateral G’H’I’J d) Quadrilateral KLMN to Quadrilateral K’L’M’N’ | |